



Department of  
Toxic Substances  
Control

245 West Broadway,  
Suite 425  
Long Beach, CA  
90802-4444

April 16, 1997



M60050\_004162  
MCAS EL TORO  
SSIC NO. 5090.3.A

Pete Wilson  
Governor

James M. Strock  
Secretary for  
Environmental  
Protection

Mr. Joseph Joyce  
BRAC Environmental Coordinator  
U.S. Marine Corps Air Station - El Toro  
P. O. Box 95001  
Santa Ana, California 92709-5001

**COMMENTS ON DRAFT FINAL PHASE II FEASIBILITY STUDY REPORT:  
MAGAZINE ROAD LANDFILL, SITE 2, OPERABLE UNIT 2B, MARINE CORPS  
AIR STATION (MCAS) EL TORO**

Dear Mr. Joyce:

The California Environmental Protection Agency (Cal/EPA) has completed the review of the above subject document dated March 1997, prepared by Bechtel National, Inc. The report presents the results of a Feasibility Study (FS) conducted to identify and evaluate potential remedial action alternatives at Site 2, the Magazine Road Landfill. Site 2 is one of two sites in Operable Unit 2B for the MCAS El Toro.

Based on our review of the response to comments and the revised FS, we find the document still deficient and does not provide adequate responses to Cal/EPA comments dated November 1, 1996. This letter is to transmit the enclosed Department of Toxic Substances Control (DTSC) and California Integrated Waste Management Board (CIWMB) comments dated April 4, 1997.

The Santa Ana Regional Water Quality Control Board has no comments on the document. Please provide revisions to the report addressing DTSC's and CIWMB's comments by May 20, 1997.

If you have any questions, please call me at (562) 590-4891.

Sincerely,

Tayseer Mahmoud  
Remedial Project Manager  
Office of Military Facilities  
Southern California Operations

Enclosure

cc: See Next Page



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Mr. Joseph Joyce

April 16, 1997

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cc: Mr. Glenn Kistner, SFD-8-2  
Remedial Project Manager  
U. S. Environmental Protection Agency  
Region IX  
Federal Facilities Cleanup Office  
75 Hawthorne Street  
San Francisco, California 94105-3901

Mr. Lawrence Vitale  
Remedial Project Manager  
California Regional Water Quality Control Board  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, California 92501-3339

Mr. Peter Janicki  
California Integrated Waste Management Board  
8800 Cal Center Drive  
Sacramento, California 95826

Mr. Steven Sharp  
County of Orange  
Environmental Health Division  
Solid Waste Local Enforcement Agency  
2009 E. Edinger Avenue  
Santa Ana, California 92705

Mr. Tim Latas  
Bechtel National, Inc.  
401 West A Street, Suite 1000  
San Diego, California 92101-7905

Mr. Andy Piszkin  
Remedial Project Manager  
Naval Facilities Engineering Command  
Southwest Division, Code 1831.AP  
1220 Pacific Highway  
San Diego, California 92132-5187



**DEPARTMENT OF TOXIC SUBSTANCES CONTROL**  
**Comments on**  
**Draft Final Phase II Feasibility Study Report (FS) for Site 2, OU-2B**  
**Marine Corps Air Station-El Toro**  
**Dated March 1997**

The list of comments below were prepared by Mr. Tayseer Mahmoud, Remedial Project Manager for Department of Toxic Substances Control (DTSC) and Mr. Ronald Okuda, Environment Assessment and Reuse Specialist for DTSC. The comments are directed to the Department of Navy and their consultants.

**GENERAL COMMENTS:**

The Department does not agree that restrictions on land and groundwater use "may be negotiated during the BRAC transfer." If the restrictions are developed as a component of the engineering control(s) to ensure the remedy is protective, the institutional control(s) should not be negotiable items. This especially applies to landfill cover remedies which are basically cap and monitor systems as opposed to an active remediation technology. The institutional controls should be evaluated with the same care as the engineering controls and a discussion of the alternatives should describe which institutional controls are appropriate for each alternative.

The MCAS El Toro Local Redevelopment Authority (LRA) approved a Community Reuse Plan for the base in December 1996. As stated in the Draft Final FS Executive Summary, the LRA has recommended that the DoD grant the Department of Interior's Habitat Reserve request. Site 2 is located within the area of the Habitat Reserve request. Although the DoD has not yet completed the federal screening process, it is fair to assume that the area (including Site 2) will be transferred to the Department of Interior. Since the "owner" of the property will remain the United States Government, deed restrictions are probably not the best institutional control to use in this case. However, the Navy can choose to prepare a land use covenant (deed restrictions) in case the federal screening isn't approved or for the Department of Interior to use if they decide to sell the land in the future.

The site has already been fenced and other institutional controls will be necessary to protect the remedy, monitoring wells, and provide for operation and maintenance. Therefore, a discussion of the institutional controls should also describe the type of agreement (e.g., Who will be responsible for maintaining the landfill cover, perform O&M, etc.) that will be "negotiated" with the Department of Interior (as the new tenant) to ensure that the remedy (engineering and institutional controls) remains protective to human health and the environment.



**OTHER COMMENTS:**

1. We could not find, in the tables or sections of Appendix A, responses to DTSC 's submitted ARARS, Orange County Health Care Agency, and Orange County Fire Department ARARS. DTSC's submitted ARARS include Title 22, CCR 66264.14(a), 66264.19(a, c), 66264.51, 66264.52(b), 66264.97 to 100, and 66264.117(c, d, f).

2. Section A3.1, location Specific ARARS, page A3-1

Having a section similar to A3-1 on page A3-1 that lists the citations examined would be good for the other sections such as Chemical and Action Specific ARARS.

3. APPENDIX A, Action-Specific ARARS

The draft final FS has deleted the discussion of Land Use Restrictions from Appendix A (formerly Sections A4.1, A4.1.1, A4.1.2, A4.5 and A4.5.1) without providing the rationale. Amendment of the base master plan to restrict future uses at Site 17 Should be a component of all alternatives being considered.

4. Table A4-1, page A4-5

Please list the appropriate sections listed under 66264.111© that are relevant ARARS. Some subsections of 66264.111 may not be appropriate.





CALIFORNIA  
EPA

California  
Environmental  
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Agency

Integrated  
Waste  
Management  
Board

8800 Cal Center Dr.  
Sacramento CA 95826  
(916) 255-2200



Pete Wilson  
Governor

James M. Strock  
Secretary for  
Environmental  
Protection

APR 04 1997

Mr. Tayseer Mahmoud  
California Environmental Protection Agency  
Department of Toxic Substances Control  
Office of Military Facilities  
Southern California Operations  
245 W. Broadway, Suite 350  
Long Beach, California 90802-4444

Subject: Review of Revised Draft Phase II Feasibility Study Report and  
Related Documents for Operable Unit 2B - Site 2, Marine Corps  
Air Station, El Toro, California

Dear Mr. Mahmoud:

On March 18, 1997, California Integrated Waste Management Board (Board) Closure and Remediation Branch staff received a submittal addressing revisions to Draft Phase II Feasibility Study Report for Operable Unit 2B, Site 2, Marine Corps Air Station (MCAS), El Toro. The submittal included the following documents:

- ▶ Response to Comments, Draft Phase II Feasibility Study Report (FSR) for Operable Unit 2B - Site 2, MCAS El Toro, California; and
- ▶ Draft Final Phase II Feasibility Study Report, Operable Unit 2B - Site 2, Marine Corps Air Station, El Toro, California, dated March 1997.

Board Closure and Remediation staff have conducted an in-depth review of the aforementioned documents and compiled several comments. Board staff comments were divided into two categories: Response to Comments on Draft FSR and Revised Draft FSR. Please note that specific comments have numbers corresponding to those from the previous comment letters.

DEPT OF TOXIC SUBSTANCES  
CONTROL, LONG BEACH

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Mr. Tayseer Mahmoud  
El Toro OU-2B, Site 2  
April 4, 1997  
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#### General Comment

Because there is a strong consensus (supported by the reuse plan developed for this site) that the postclosure land use for this site will be a wildlife habitat reserve, Board staff evaluated all available site investigation and feasibility study submittals in context of their relevance and compatibility with the proposed Site 2 reuse. This includes not only any already conducted or future investigation and design work but also methodologies on which these activities have been based.

Based on Board staff review, it appears that under the proposed postclosure land use conditions, a chosen closure alternative should require as little postclosure maintenance as possible since any postclosure maintenance or repair procedures would interfere with the integrity of the wildlife reserve.

Also, it should be pointed out that the capping of the landfill (along with all necessary institutional controls and monitoring systems) is not required solely to limit water infiltration into the landfill but also to prevent potential landfill gas emissions and provide environmental protection to any proposed developments on the land surrounding the landfill.

#### Response to Comments on Draft FS

Because of a fairly specific postclosure land use proposed for Site 2 (wildlife reserve habitat) and potentially very complex postclosure maintenance procedures (trying not to disturb the integrity of the habitat), all institutional controls (site security, access to monitoring points, restrictions on on-site development, and site maintenance), should be identified, established and integrated into the landfill closure and postclosure maintenance programs. Board staff do not find acceptable the approach taken in the FS to refer the institutional controls to a negotiation process during the base transfer. Both the design and operation of institutional controls should be derived in conjunction with landfill closure.



General Comments

In order to reduce the size of the Board staff review letter, the original Board staff comments are not cited in this portion of the review letter. Please refer to Board staff letter of September 30, 1996, to view the original comments.

1. Board staff disagrees with the response to this comments. To the Board staff knowledge, only the flux chamber sampling results cannot be directly compared with the sampling results from the other sampling methods. Board staff requests that, except for the flux chamber sampling, all other sampling results be presented in the parts per million (or billion) by volume (ppm<sub>v</sub>). Under the present conditions, where multiple units are used to present the sampling results, it is very difficult to conduct direct comparisons of results and thus, expedite the document review. It also should be noted that although this comment had been made during the Site 2 review, it applies to all documents submitted for the El Toro MCAS landfill closure (Sites 3, 5, and 17).
2. The response does not provide a satisfactory explanation on the chosen depths of the multiple depth gas monitoring wells. The regulatory requirements for a perimeter landfill gas monitoring network are clearly outlined in 14 CCR, section 17783.5, and both the response and the FS should be tailored to address all requirements listed in this section.

Although Board staff concur that, for the time being, methane off-site migration monitoring would be sufficient at this site, monitoring results should be closely watched, and if necessary, corrective actions be taken immediately. Since corrective actions may involve installing and operating a gas collection system, proposed final cover design should be evaluated for the purpose of compatibility with a gas collection system and ease of installation of such system.

3. Board staff disagrees that the annual postclosure maintenance costs should be based on a net present worth concept. Because of a number of uncertainties associated with the landfill postclosure maintenance, discounting practice is generally discouraged in California (see attached excerpts from U.S. EPA Final Rule regarding Final Assurance Mechanism for Municipal Solid Waste Facilities [40 CFR Part 258]).



4. Board staff do not find the position that the soil loss calculations will be conducted as a part of the final remedial design acceptable. As it was indicated in the FS, Site 2 experiences severe erosion problems (this was observed during a site visit). Without soil loss estimates, Board staff cannot fully evaluate the proposed final cover alternatives or configuration and sizing of the proposed runoff collection system (including energy dissipation and erosion protection measures). Board staff request that these calculations be conducted at the FS stage in order to determine if the chosen final cover materials are applicable under the high erosion conditions (soil loss calculations should account for these specific materials).
5. Drainage calculations provided in the revised FS indicate a high potential for embankment erosion and high sediment content in the runoff. Board staff request that the sediment content calculations be provided in order to validate the proposed rip-rap erosion protection along the drainage channel. Board staff are concerned that excessive sediment deposits may both impair the holding capacity of the drainage channel and make drainage channel maintenance labor-intensive and thus expensive. Perhaps other erosion reducing measures such as channel widening, and runoff re-routing should be considered in addition to or instead of the rip-rap. Thus, in order to validate the proposed general approach (existing drainage channel with rip-rap protection), it is necessary to include the sediment content calculations at the FS stage.
6. Board staff find this response acceptable.
7. Board staff find this approach acceptable, however, all institutional controls such as site development restrictions and access to monitoring and control systems should be included as an integral part of landfill closure (during the FS stage) and should not be negotiated during the transfer process.
8. Board staff find this response acceptable.
9. It is unclear how the quantities of wastes to be excavated and consolidated were derived. Thus, it is requested that all of the assumptions, field explorations, and volumetric calculations used for the purpose of landfill consolidation be included in the FS.



Specific Comments

10. Board staff request that more detailed drainage system drawings be provided as a part of the FS. Of special interest to Board staff are more detailed design drawings depicting the placement of the proposed rip-rap erosion protection.
11. Because of a limited knowledge on the landfill waste fill and its gas generation potential, landfill gas monitoring frequency should remain as quarterly for the period of 30 years (worst case scenario) and the postclosure maintenance cost estimate should account for it. Only after conducting the actual field measurements over an extended period of time (depending on the monitoring results and postclosure land use around the landfill, this time may vary), a request may be submitted to reduce the landfill gas monitoring frequency; however, such request must be substantiated by actual field measurements.
12. Similarly to the previous comment, landfill cap inspections should remain quarterly until, based on field inspections, it can be demonstrated that the on-site conditions have stabilized enough to justify a reduced frequency of inspections. However, until such time, the final cap inspections should be conducted on a quarterly basis. Also, the postclosure maintenance cost estimate should account for quarterly inspections for a period of 30 years.
13. Please refer to the previous comment.

Comments on Revised FS

- A. After reviewing the revised FS, it does not appear that the proposed closure alternatives have been tailored specifically for wildlife habitat conditions. Specifically, the issue of postclosure maintenance and repair procedures and their interference with wildlife were not addressed.



Mr. Tayseer Mahmoud  
El Toro OU-2B, Site 2  
April 4, 1997  
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- B. Board staff disagrees that the annual postclosure maintenance costs should be based on a net present worth concept. Because of a number of uncertainties associated with landfill postclosure maintenance, discounting practice is generally discouraged in California (see attached excerpts from U.S. EPA Final Rule regarding Final Assurance Mechanism for Municipal Solid Waste Facilities [40 CFR Part 258]).
- C. Should the monolithic native soil final cover be considered as a viable closure option, such proposal must be submitted in conformance with guidelines included in 14 CCR, Section 17773 (c).
- D. The FS states that the final cover utilizing a low permeability clay layer will use materials derived from an off-site source (Bee Canyon). However, Board staff have contacted the Orange County Integrated Waste Management Department, the operator of Frank Bowerman Sanitary Landfill (formerly Bee Canyon Landfill), and were informed that their staff were not aware of any inquiries regarding availability of clay for off-site projects. An explanation for how the availability of clay material from that location was validated should be provided.

Should you have any questions regarding this matter, please call me at (916) 255-1195.

Sincerely,



Peter M. Janicki  
Closure and Remediation South  
Permitting and Enforcement Division

Enclosure



[Federal Register: November 27, 1996 (Volume 61, Number 230)] [Rules and Regulations]

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## Part II

### Environmental Protection Agency

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#### 40 CFR Part 258

Financial Assurance Mechanisms for Local Government Owners and Operators of Municipal Solid Waste Landfill Facilities; Final Rule

[[Page 60328]]

### ENVIRONMENTAL PROTECTION AGENCY

#### 40 CFR Part 258

[FRL-5654-3]

RIN 2050-AD04

Financial Assurance Mechanisms for Local Government Owners and Operators of Municipal Solid Waste Landfill Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

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**SUMMARY:** As part of the President's regulatory reform initiative, the Environmental Protection Agency (EPA) is amending the financial assurance provisions of the Municipal Solid Waste Landfill Criteria, under subtitle D of the Resource Conservation and Recovery Act. The financial assurance provisions require owners and operators of municipal solid waste landfills (MSWLFs) to demonstrate that adequate funds will be readily available for the costs of closure, post-closure care, and corrective action for known releases associated with their facilities. The existing regulations specify several mechanisms that owners and operators may use to make that demonstration. Today's rule increases the flexibility available to owners and operators by adding two mechanisms to those currently available. The additional mechanisms, a financial test for use by local government owners and operators, and a provision for local governments that wish to guarantee the costs for an owner or operator, are designed to be self-implementing. Use of the financial test provided in this rule allows a local government to use its financial strength to avoid incurring the expenses associated with the use of a third-party financial instrument. Demonstrating that the costs of closure, postclosure care, and corrective action for known releases are available protects the environment by assuring that landfills will be properly managed at the end of site life when revenues are no longer being generated and physical structures may begin to break down.

**DATES:** The effective date for this final rule is April 9, 1997. The compliance date for MSWLF's is April 9, 1997, except for small, dry or remote landfills which have until October 9, 1997 to comply.

**ADDRESSES:** Supporting materials are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway I, first Floor, 1235 Jefferson Davis Highway, Arlington, VA. The Docket Identification Number is F-96-LGFF-FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. To review docket materials, it is recommended that the public make



out that such practices are prohibited in many states.

Response: Today's rule maintains the local governments guarantee as proposed and does not restrict its use. As discussed above, EPA believes that a local government that meets the financial, public notice, and recordkeeping and reporting requirements of the financial test will be able to fund the assured MSWLF closure, post-closure care or corrective action obligations in a timely manner. A local government may, of course, only guarantee the closure, post-closure or corrective action costs of another MSWLF owner and operator, if such an arrangement is consistent with state law. Even if a local government guarantee is not precluded by state law, a state may nevertheless disallow the use of the guarantee if it determines that there is the potential for abuse.

Comment: Commenters suggested several clarifications to provisions of the proposed local government guarantee. Response: Today's rule clarifies that if a guarantee is cancelled, then pursuant to Sec. 258.74(h)(1)(iii) the owner or operator of the MSWLF must obtain alternate financial assurance within 120 days following "the guarantor's notice of cancellation" (not within 120 days following "the close of the guarantor's fiscal year"). Similarly, today's rule clarifies that if the local government guarantor no longer qualifies to use the financial test, then, pursuant to Sec. 258.74(h)(2)(iii), the owner or operator of the MSWLF must obtain alternate financial assurance within 90 days following "the determination that the guarantor no longer meets the requirements of paragraph (f)(1) of this section"; not within 90 days following "the guarantor's notice of cancellation."

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### C. Discounting of Costs in Calculating Financial Assurance Cost Estimates

The financial assurance requirements under RCRA subtitle D currently require owners and operators to calculate cost estimates in current dollars, and aggregate these estimates (even though these costs may be incurred many years in the future). Owners must obtain a financial responsibility instrument for at least the amount of this aggregated cost estimate. In the preamble to the December 27, 1993 proposed rule (58 FR 68353, 68361), EPA solicited comments on whether MSWLF owners and operators should be allowed to use a present value based on a discount rate to estimate certain financial assurance costs. Cost discounting would allow owners and operators to adjust an aggregated cost estimate to reflect the fact that activities are scheduled to occur in the future and to obtain a financial instrument for less than the aggregate costs (i.e. the "present value" of the aggregated costs). (See Comment Response Document, Section 7) Comment: A number of commenters opposed allowing MSWLF owners and operators to discount financial assurance costs because of their belief that landfill owners and operators often underestimate cost estimates and that the timing of a closure event is uncertain. One commenter suggested that the risks of discounting could be minimized with State oversight if EPA provided specific guidelines. Response: The Financial Accounting Standards Board (which sets standards for corporate accounting) allows discounting only when costs and timing of closure are certain and then only for an essentially risk free rate, adjusted for inflation. The Agency agrees with commenters that cost estimates are frequently underestimated and that the closure date is usually uncertain because sites may fill up more quickly than expected or they may close because of enforcement actions as a result of rule violations. We also agree with the Financial Accounting Standards Board that discounting is only appropriate when cost estimates and closure dates are certain. For these reasons, the Agency has decided against allowing discounting without State oversight. Because the Agency recognizes that there are cases where cost estimates are accurate and closure dates are certain, we have decided to allow State Directors to allow discounting for closure, postclosure, and corrective action costs if they believe that cost estimates are accurate and the closure date is certain and where the local government has submitted a finding from a Registered Professional Engineer that cost estimates are accurate and certifies that there are no known factors which would change the estimated closure date. The State must also determine that the facility is in compliance with all regulations it determines to be applicable and appropriate. Consistent with other elements of this rule, cost estimates must be adjusted annually to reflect inflation and remaining site life. The discount rate used may not be greater than the rate of return for essentially risk free investments, such as 1 year Treasury bills, net of inflation. As noted above, discounting at an essentially risk free rate of return is that allowed by the Financial Accounting Standards Board and was suggested by several commenters. The Government Accounting Standards Board notes that EPA is allowing for discounting for inflation because it allows annual adjustments of cost estimates for inflation. For this reason the Agency requires that inflation be deducted from an essentially risk free rate